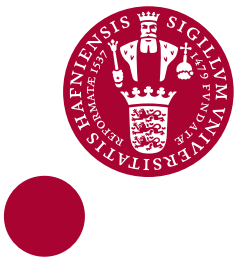

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INVESTIGATING GROWING INEQUALITY IN MOZAMBIQUE

CARLOS GRADÍN[*,†] AND FINN TARP[†]

Abstract
In this paper, we investigate the long-term trend of consumption inequality in Mozambique. We show that an imbalanced growth path disproportionally benefited the better-off and caused increasing inequality, especially in more recent years, curbing the necessary reduction in poverty. Using a regression decomposition technique, our results suggest that this trend was strongly associated with the higher attained education of household heads and with the changes in the structure of the economy (with less workers in the public and subsistence sectors). The trend was, however, mitigated by the tendency for the higher level of attained education and the smaller public sector to become associated with less inequality over time. These results point to the importance of accelerating the expansion of education and improving the productivity of the large subsistence sector to lower inequality in line with the sustainable development goals.
JEL Classification: D63, I24, O55
Keywords: Inequality, Mozambique, decomposition, RIF

1. INTRODUCTION

Mozambique was the poorest country in the world in 1992, when the war that followed from the early 1980s after independence from Portugal in 1975 came to an end. Per capita GDP was US$354 (2011 PPP) and poverty was widespread. Economic reforms were initiated in 1986, and recovery followed with rapid economic growth from the mid-1990s onwards, reaching a GDP per capita of US$1,128 in 2016. Yet the country still ranks among the poorest in the world.[1]

Economic growth brought a substantial reduction in poverty levels. This is so whether poverty is measured with monetary or non-monetary indicators, as reported, among others, by the last two national poverty assessments (MPD/DNEAP, 2010; MEF/DEEF, 2016). Poverty, however, continues to be high, in part, because of the persistence of economic constraints (i.e. inadequate education, trade and transport systems). They slow

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[1] GDP data from the World Bank, International Comparison Program database (http://data.worldbank.org), accessed on 11/08/2017.

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down further poverty reduction compared with countries, like Vietnam, which have achieved a more pro-poor growth pattern (Arndt *et al*., 2012).

The sustainable development goals have made the reduction of poverty in the developing world a priority, but also the reduction of inequalities to guarantee that no one is left behind (Goal 10). Sub-Saharan Africa is among the most unequal regions in the world and a puzzle for traditional development economics models and the popular Kuznets' inverted-U hypothesis because it is also the least developed. This, however, implies that there is a risk that inequality increases even more during the initial stages of development of the non-subsistence sector in a region with predominantly resource-led growth. Higher levels of inequality could harm the stability of an extremely fragile region and undermine the effectiveness of poverty reduction strategies.

The scarce evidence for relative inequality in this region points at no clear pattern in the last decades. Inequality does not seem to have changed much on average (see review in Alvaredo and Gasparini, 2015), but is associated with large heterogeneity in levels, trends and explanatory factors depending on the initial conditions and how inclusive economic growth was, as recently pointed out in a UNDP report (Odusola *et al*., 2017). This report has also summarised the main driving forces of inequality in the region: (i) a highly dualistic economy structure, with a large informal or subsistence economy cohabiting with a small elite working in the formal economy (i.e. public, international and resource sectors); (ii) the high concentration of land and physical and human capital in certain groups and regions; and (iii) a limited distributive capacity of the state, leading to the "natural resource curse," the urban bias of public policy, and ethnic and gender inequalities.

The last two national poverty assessments in Mozambique documented an increase in consumption inequality in this country. While Mozambique's overall initial level of inequality was high according to world standards, this was not so given the African context, except for the urban areas (Fox *et al*., 2005). Inequality slightly increased between the first two post-war households budget surveys (1996/97 and 2002/03) to later remain barely constant (between 2002/03 and 2008/09).[2] However, a much larger increase in inequality was recently found between the last two surveys (2008/09 and 2014/15). National poverty assessments emphasised evidence of underreporting in food consumption by the poor that might imply that the actual level of inequality is lower than reported. But inequality could also be significantly higher if we take account of underreporting among the relatively better-off (Arndt and Mahrt, 2017) or how the expenditure structure differs for these households as compared with the poor (Arndt *et al*., 2015).

This paper contributes to the growing literature on inequality in Mozambique and, by extension, in sub-Saharan Africa. We analyse the long-term trend in inequality in Mozambique and characterise its distributional pattern. We also identify some of the underlying drivers using a regression-based decomposition technique based on the Recentered Influence Function of the Gini index. In line with Gradín (2016), we first investigate the role of several household characteristics on inequality in every year. Then, we construct a counterfactual distribution in which we combine the average characteristics

[2] Elbers *et al*. (2005) showed that in Mozambique, like in Ecuador and Madagascar, most inequality in 1996/97 was within the small administrative units. The change in inequality between 1996/97 and 2002/03 has been analysed, for example, by James *et al*. (2005) and by Fox *et al*. (2005), using decompositions by different population subgroups.

of the initial year while keeping the impact of these on inequality that prevailed in the final year. Using this counterfactual, we decompose the overall change in inequality over time into two terms. One is the change in inequality that can be attributed to a change in the composition of the population by characteristics (characteristics or explained effect). The other is the change in inequality that can be attributed to the change in the relationship between these characteristics and inequality (coefficients or unexplained effect). The results point in the direction that there was a robust increase in inequality, driven by an unbalanced growth pattern that has disproportionally benefited the better-off. This growth pattern is characterised by the emergence of a non-subsistence economy in Maputo and other urban areas, in a resource-based country, with a shrinking public sector, the expansion of education and the emergence of a small but highly educated elite. The results show that the increase in inequality can be mostly accounted for by this compositional effect rather than by a structural change in terms of how household characteristics affect inequality.

In what follows, the next section describes the data and main variables used while Section 3 discusses the latest trends in inequality. Section 4 introduces the decomposition methodology while Section 5 presents the empirical results. The last section concludes.

2. DATA AND VARIABLES USED IN THE ANALYSIS

The empirical analysis is based on the four nationally representative households budget surveys collected by the *Instituto Nacional de Estatística* (INE) after the end of the post-independence war: the *Inquéritos aos Agregados Familiares* (IAF) for 1996/97 and 2002/03, and the *Inquéritos ao Orçamento Familiar* (IOF) for 2008/09 and 2014/15.

We use daily real per capita consumption as our main indicator of individual well-being, although nominal consumption will also be used for robustness analysis. Consumption is usually preferred to income in inequality analyses in developing countries, especially in the sub-Saharan region. We use here the same indicator constructed for the Fourth National Poverty Assessment MEF/DEEF (2016) based on the PLEASe methodology (see Arndt *et al*., 2017a for details). In a first normalisation, current real consumption is obtained by adjusting nominal consumption in each survey to correct for seasonal and spatial variation in prices using price indices computed separately for 13 geographical regions. We proceed with a second normalisation to produce real consumption in constant terms over time. We divide current real consumption by the contemporary official poverty line (which is also expressed in contemporary real consumption terms). This deflator allows us to describe the change in household purchasing power of a (flexible) basket of basic food and non-food goods over time. Note that this second normalisation does not affect relative inequality measures because the contemporary poverty line is the same for all individuals within each survey.[3]

[3] The Consumption Price Index in Mozambique is only estimated using prices in a few urban areas. Poverty lines in contemporary currency (in parentheses 2011 PPP using the World Bank GDP deflator) are MZM 5,502 (US$1.13) in 1996/97, MZM 8,307 (US$0.95) in 2002/03), MZN 17.93 (US$1.37) in 2008/09 and MZN 29.19 (US$1.76) in 2014/15. The use of a common deflator (regardless of the level of consumption) is a rather conservative approach. Arndt *et al*. (2015) have recently shown that the increase in inequality between 2002/03 and 2008/09 was 0.030 Gini points higher when using a composite household-specific price index that is sensitive to the differences in the structure of consumption of the relatively well-off and the poorer households.

IAF/IOF surveys have been the main source for the analysis of well-being in Mozambique. They have, however, suffered from a variety of limitations in the collection of data, shared with other large developing countries and aggravated by the lasting consequences of the conflict, such as the lack of infrastructure, the presence of land mines, market fragmentation, flooding in certain areas and the use of non-standard unit measures. (Arndt *et al*., 2017b). The surveys are also associated with the well-known problem of underreporting of food consumption that has been aggravated in the most recent one. Initially confined to urban areas in the South, it is now affecting rural areas too (MEF/DNEAP, 2016). This underreporting is in part related to infrequent purchases, especially of rice and corn flour. Like most household surveys, IAF/IOF also suffer from underestimation of top values due to the underrepresentation and/or underreporting of consumption by relatively well-off households (Arndt and Mahrt, 2017).

In the first three surveys, we have information about consumption for a total of, respectively, 8,250, 8,700 and 10,832 households interviewed once over four quarters. They account for a total of 42,667, 44,083 and 51,177 individuals, respectively. The design of the most recent survey is different. We have information for around 11,000 households that were interviewed one, two or three times between August 2014 and July 2015 (with a total of 11,505 households interviewed in the first quarter, 10,372 in the second one and 11,315 in the fourth quarter). In this last case, we use the pool of households in the analysis (58,342, 50,770 and 55,198 individuals, respectively) to prevent a seasonal bias (which is not present in the other surveys because the sample of households was distributed in different quarters). The unit of analysis is always the individual, while the income sharing unit at which individual well-being is determined is the household. For that reason, individuals are attributed the per capita consumption and the characteristics of their households. Standard errors are clustered within households and all estimations used sampling weights.

To explain changes in inequality over time, we consider several characteristics of households available in these surveys that may have influenced their consumption levels. We account for economic opportunities varying by location using information about the area (rural or urban)[4] and province of residence (Niassa, Cabo Delgado, Nampula, Zambezia, Tete, Manica, Sofala, Inhambane, Gaza, Maputo and Maputo City). Demographic variables considered include the number of children (aged 14 or less) and adults in the household, as well as the marital status (single, married, widowed, separated or divorced), age (in brackets) and sex of the household head.[5] We also considered the education attained by the household head. Several variables accounted for the employment status of the household head. First, we used the head's industry, distinguishing whether the head is (i) employed in the non-subsistence sector, operationalised here as remunerated work (not being a family helper) outside the primary sector; (ii) working in

[4] The definition of urban area in 1996/97 is narrower than in the subsequent surveys. Consistent definitions of area were used for comparing 1996/97 with 2002/03, and the latter with subsequent surveys. Maputo City is entirely urban and Maputo province is mostly urban (70%), while the majority of the population is rural in the other provinces, with the urban population ranging between 14% in Tete and 36% in Sofala (2014/15).

[5] In the regressions, we will not use a few observations with unknown age and sex of the household head.

the subsistence sector; and (iii) not employed.[6] We also considered two dummy variables indicating whether the head is self-employed or works in the public sector, respectively. Finally, we included the employment rate of household adults (the number of employed adults in the household divided by the number of adults, taking the value zero in few cases in which there were no adults at all).

3. TRENDS IN INEQUALITY

The densities of real per capita consumption for the different years are displayed in Fig. 1. Mean consumption values and several quantiles are reported in Table A1 in the Appendix. Real per capita consumption increased by two thirds over the entire 1996/1997–2014/2015 period, corresponding to an accumulated average annual growth rate of 2.9%. Yet this rate was not homogeneous in different subperiods. The average annual growth rate was 5.2% between 1996/1997 and 2002/2003. Hereafter,

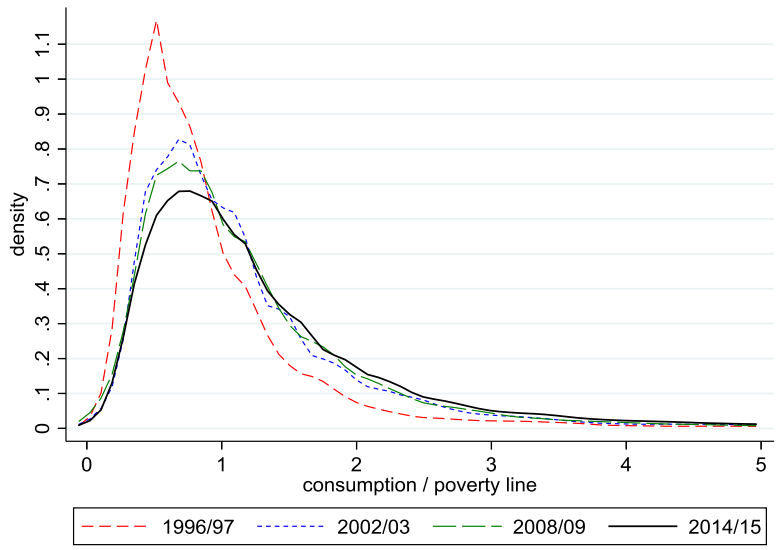

Figure 1. Daily real per capita consumption: densities [Colour figure can be viewed at wileyonlinelibrary.com]
Note: Daily real per capita consumption values, expressed in constant terms (deflated by the contemporary poverty line).
Source: Authors' calculations based on IAF/IOF.

[6] We also included a dummy to control for cases in which the household head was employed while the industry was unknown (less than 1% in any survey). Compared with other options, like not using the variable or removing the affected observations, this allows us to minimize the loss of information (preserving all the information that is not missing in those observations).

consumption remained almost constant until 2008/2009 (0.2%) to increase again at an annual average rate of 3.3% until 2014/2015.[7]

Increases in real per capita consumption took place across the entire distribution. The densities shifted to the right, consistent with the well-established reduction in the incidence and intensity of poverty. The official poverty rate declined from 70% in 1996/1997 to 46% in 2014/2015: a sharp reduction until 2002/2003 (reaching 53%), a more modest decline (from 52 to 46%) between 2008/2009 and 2014/2015 (see MEF/DNEAP, 2016 for a more detailed analysis of poverty). This was accompanied by an initial decline in the intensity of poverty too. The median poverty gap, according to our own calculations, declined from 43 to 35% of the poverty line in the first period, remaining at this level thereafter.

The increase in real per capita consumption exhibited, however, a clear pattern disproportionally benefitting the relatively well-off as shown in Figs. 2 (selected percentiles in absolute terms) and 3 (relative growth incidence curves). This is in line with earlier results (e.g. James *et al*., 2005 for 1996/1997–2002/2003), but was accentuated during the last period. Growth in consumption was largest for the highest percentiles in both absolute and relative terms. While real consumption grew by 73% for the 95th percentile over the entire period, the median grew by 47%, and the 5th percentile only grew by 33%. There are different patterns across periods, though, with the highest growth for the

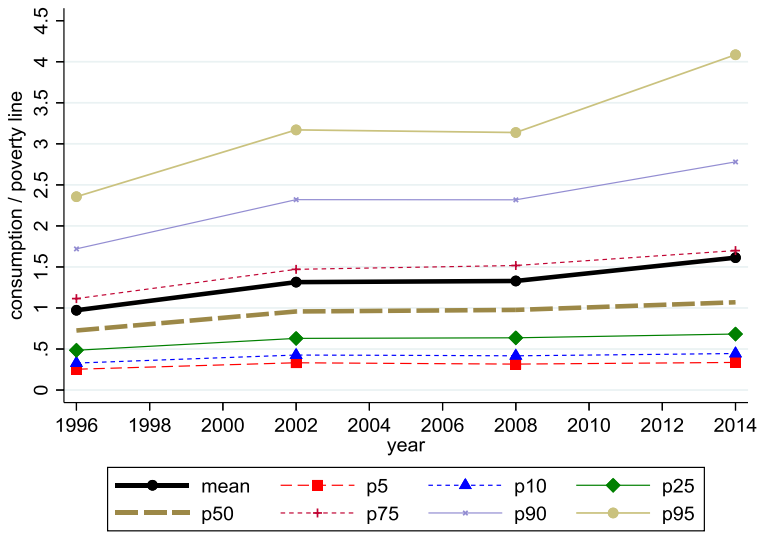

Figure 2. Daily real per capita consumption: mean and quantiles [Colour figure can be viewed at wileyonlinelibrary.com]
Note: Daily real per capita consumption values normalised by the contemporary poverty line.
Source: Authors' calculations based on IAF/IOF.

[7] The closest per capita expenditure aggregate in National Accounts (i.e. households and nonprofit institutions serving households, constant 2010 US$) also shows a large increase over the entire period, 79%, but with no stagnation in the middle one; the average annual rates were, respectively, 4.9, 2.6 and 2.3% (http://data.worldbank.org, accessed on 06/09/2018).

well-off occurring during the last subperiod. This inequality increase is also illustrated by the increase in the p50/p10 and p90/p50 ratios (respectively from 2.2 to 2.4 and from 2.4 to 2.6), with the bulk of the increase in the last period. This unbalanced growth is compatible with significant improvements at the very bottom in the first and last periods that contrast with the decline in their consumption during the intermediate period, characterised by stagnation on average (Fig. 3).

The non-overlapping empirical Lorenz curves shown in Fig. 4, not surprisingly, reveal an unambiguous increase in inequality in both periods of consumption growth (1996/1997–2002/2003 and, especially, 2008/2009–14/15). Lorenz dominance was statistically significant in both periods (Table A9).[8] Less obvious is the trend in the intermediate period of stagnation in consumption (2002/2003–08/09). While the 2008/2009 curve crosses the 2002/2003 one from below around the 65th percentile, the cross is not statistically significant (while the difference between both curves is statistically significant only below the 13th percentile). This implies also an increase in inequality in this period according to the Lorenz criterion. For the entire period, the most recent Lorenz curve falls entirely below the earliest one, with the differential being statistically significant at all percentiles.

The increase in inequality is corroborated using a variety of inequality indices, like Gini, and the Generalised Entropy and Atkinson families, all of them consistent with Lorenz dominance.

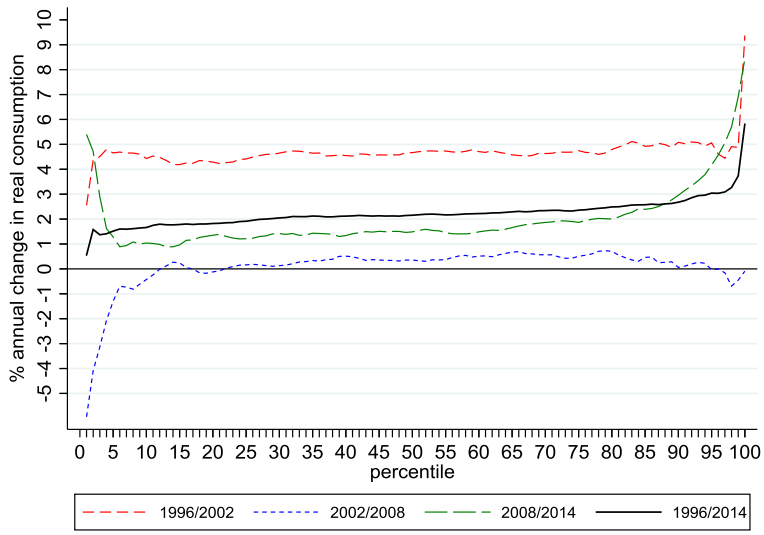

Figure 3. Daily real per capita consumption: (relative) growth incidence curves [Colour figure can be viewed at wileyonlinelibrary.com]
Note: Daily real per capita consumption values normalised by the contemporary poverty line.
Source: Authors' calculations based on IAF/IOF.

[8] The 2002/03 curve is below the 1996/97 curve everywhere, but only with high statistical significance (at 90 or 95%) in the upper tail. The 2014/15 curve falls below that of 2008/09 for all percentiles, being statistically significant (95%) above the 7th percentile. See Table A9.

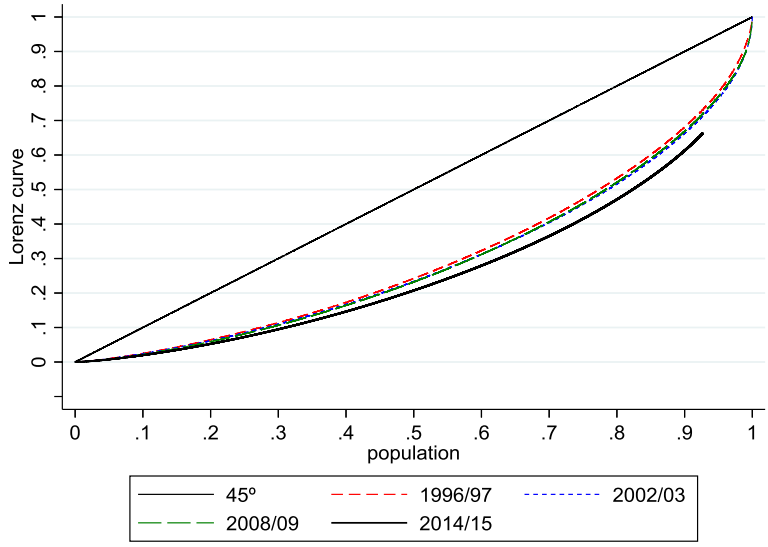

Figure 4. Lorenz curves of real per capita consumption [Colour figure can be viewed at wileyonlinelibrary.com]
Source: Authors' calculations based on IAF/IOF.

The Gini index of real per capita consumption increased by 4.6% in the 1996/1997–2002/2003 period, and by 12.7% in the 2008/2009–14/15 period, remaining constant in between (–0.1% between 2002/2003 and 2008/2009), as displayed in Fig. 5 and Table A1. The increase in inequality, as measured by the Gini index, over the entire period was 17.8%.[9]

Figure 5 shows the trend in the Gini index using four alternative well-being indicators for the sake of robustness, with real and nominal consumption (no adjustment for spatial and temporary variation in prices), and in each case with per capita and per adult equivalent (using the square root of household members) – see Tables A1–A4 in the Appendix. The Gini index is substantially higher when consumption is nominal instead of real. This reflects that in Mozambique, as in other developing countries, geographical differences in prices are substantial. It is slightly lower, however, when it is equivalised instead of per capita. The Gini index for Mozambique follows the well-known U-pattern with the level of economies of scale associated with cohabiting in households, with not much difference found between the per capita case (no economies of scale) and the most common equivalent scale found in the literature (of mostly middle- and high-income countries).

The global trend, however, is similar although with different intensities, indicating that the increase in inequality is robust to alternative methodological choices. The total increase in inequality ranges between 16% and 20%, corresponding to 5%–9% during

[9] Changes in Gini of real per capita consumption inequality over time are all statistically significant using bootstrap standard errors (bias-corrected 95%confidence intervals), except between 2002/03 and 2008/09 (see Table A1).

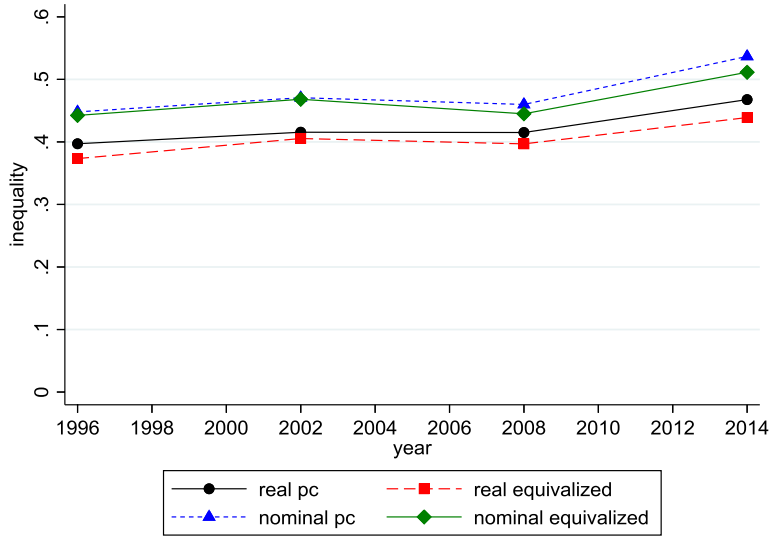

Figure 5. Gini index of consumption inequality, alternative consumption estimates [Colour figure can be viewed at wileyonlinelibrary.com]
Note: Real consumption is nominal consumption adjusted using intra-survey temporary and spatial price indices. The square root of the household size was used to estimate the corresponding equivalised values.
Source: Authors' calculations based on IAF/IOF.

the first period, and 11%–17% in the last period. Inequality declines in the intermediate period between 0% and 5%, depending on the case.[10]

Arndt and Mahrt (2017) have recently shown that re-scaling consumption by discrepancies with National Accounts would increase the level of inequality as measured by the Gini index. It would also affect the trend (with a higher increase between 2002/2003 and 2008/2009, and a lower increase in the last period). In the opposite direction, a correction for underreporting in food consumption in 2014/2015 (based on meals reported by households that are not reflected in their consumption) would reduce the level of inequality in that year. Although one could expect this reduction to be larger than in previous years, the effect on the trend cannot be computed due to the lack of necessary information.[11] Due to these opposite effects and the impossibility of controlling for all of them in all surveys, we do not make any adjustment for underreporting, but the results should be interpreted in the context of these data limitations.

The Generalised Entropy (Fig. 6) family of measures also shows a unanimous increase in inequality in real per capita consumption during the initial and, especially, final

[10] The respective changes in the Gini index for each period are 8.6%, –2.1% and 10.6% for real equivalised consumption, and 5.1%, –2.3% and 16.7% for nominal per capita consumption.
[11] According to our own calculations, the Gini in 2014/15 would be smaller by between 0.004 and 0.020, depending on the assumptions made (for the methodology used in adjusting consumption for under-reporting, see MEF/DEEF, 2016).

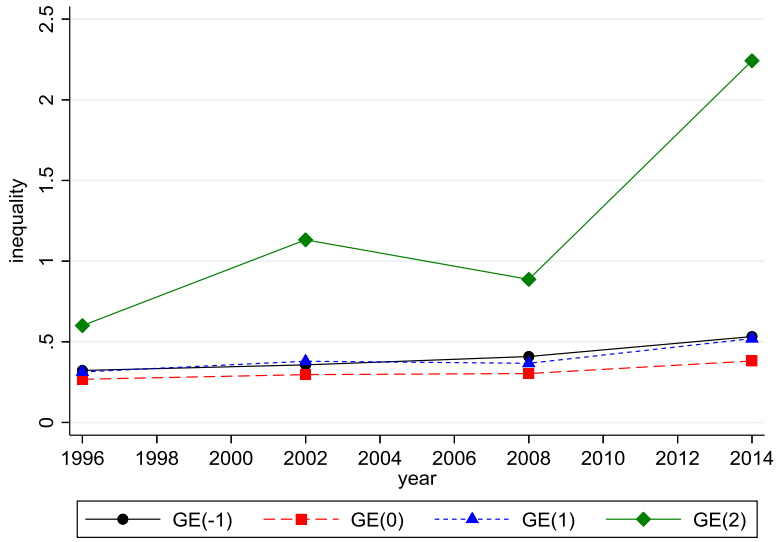

Figure 6. General Entropy (GE) indices of real per capita consumption inequality [Colour figure can be viewed at wileyonlinelibrary.com]
Source: Authors' calculations based on IAF/IOF.

periods (with similar results for the Atkinson family of indices shown in the Appendix). These indices also help better characterise the distributional pattern of the inequality increase. They confirm that these increases in inequality tend to be larger with higher sensitivity of the indices to top consumption values (higher α). In this line of reasoning, the increase in inequality using the *GE*(2) is remarkable. In the last period, there was also an important increase in inequality with higher sensitivity to the bottom of the distribution, likely the result of the underreporting of food consumption mentioned above. In the intermediate 2002/2003–2008/2009 period, on the contrary, there is an increase or a decline in inequality depending on whether we put more weight on inequality among the poor or the better-off, respectively (inequality declines for $\alpha \geq 1$, increases otherwise), which does not come as a surprise due to the crossing empirical Lorenz curves.[12]

4. METHODOLOGY: DECOMPOSING INEQUALITY CHANGES OVER TIME

Let $\boldsymbol{y} = (y_1,\ldots,y_N)$ indicate a vector of consumption across a population of N individuals. We will measure inequality using the Gini index, $I(\boldsymbol{y})$. We assume that the contribution of the ith individual to the overall inequality $I(\boldsymbol{y})$ is given by the recentered influence function of I, estimated for consumption y_i, $RIF(y_i; I)$ (Firpo *et al.*, 2007, 2009). The *RIF* measures the impact on the target statistic of marginally increasing the population with

[12] Changes in GE (and Atkinson) indices of real per capita consumption inequality over time are all statistically significant at 95% using bootstrap standard errors (bias-corrected confidence intervals), except between 2002/03 and 2008/09, in which case only GE(–2) and GE(–1) (and A(2)) show statistically significant increases (see Table A1).

consumption y_i, with the overall inequality being just the average impact, $I(\boldsymbol{y}) = E(RIF(y; I))$.[13] The *RIF* function is a U-shaped transformation of y_i, reflecting that a marginal increase in the population with extremely low and high values would have a disproportional increase in inequality. A marginal increase in the population around the mean consumption, however, will tend to have a small or no effect on inequality. The exact values of the *RIF* function are index specific, in particular, reflecting the different sensitivities of the indices to the different parts of the distribution. That is, some indices will increase at a higher rate after a marginal increase in the population at the top or at the bottom (see the analysis of the RIF of different inequality indices in Gradín, 2016, 2018).

The relationship between these individual contributions to inequality and household characteristics is given by a $N \times K$ matrix X (including a constant) that can be estimated by OLS[14]:

$$RIF\left(y_i; I\right) = \sum_{k=1}^{K} \bar{x}_k \beta_k + \varepsilon_i. \tag{1}$$

We can interpret β_k, $k \geq 2$, as the expected effect on inequality of a marginal change in the average value of the kth characteristic, $\bar{x}_k$, ceteris paribus while β_1 reflects the expected value of inequality when $x_k = 0$, $k \geq 2$. In the case of dummy variables, this means that β_k measures the marginal impact of a slight increase in the proportion of individuals with $x_k = 1$, and β_1 the expected value of inequality for the reference household (defined by the omitted categories).

We can thus rewrite $I(\boldsymbol{y})$ as the sum of the impact of household characteristics on inequality:

$$I(\boldsymbol{y}) = \sum_{i=1}^{N} RIF\left(y_i; I\right) = \bar{X}'\beta = \sum_{k=1}^{K} \bar{x}_k \beta_k. \tag{2}$$

The counterfactual inequality index $I^{01}(\boldsymbol{y}) = \bar{\mathrm{X}}^{0'}\beta^1$ indicates the expected value of inequality in the final year if the characteristics remained constant over time (superscripts 0 and 1 refer to the initial and final years, respectively). With this counterfactual, we can decompose the change in inequality over time into two distinct contributions:

$$I^1(y) - I^0(y) = \bar{\mathrm{X}}^{1'}\beta^1 - \bar{\mathrm{X}}^{0'}\beta^0 = (\bar{\mathrm{X}}^{1'} - \bar{\mathrm{X}}^{0'})\beta^1 + \bar{\mathrm{X}}^{0'}(\beta^1 - \beta^0). \tag{3}$$

The coefficients effect, $\bar{\mathrm{X}}^{0'}(\beta^1 - \beta^0)$, is the structural change and it indicates the expected change in inequality if average characteristics had remained constant over time

[13] Let us consider a mixture distribution $\boldsymbol{y}_\varepsilon$ that assigns a probability ε of having a mass 1 at y_i and $1-\varepsilon$ of being the original distribution. The influence function $IF\left(y_i; I(\boldsymbol{y})\right) = \frac{\partial}{\partial \varepsilon} I(\boldsymbol{y}_\varepsilon)|_{\varepsilon=0}$ is the directional derivative of I for this mixture distribution when $\varepsilon \to 0$ and has zero expectation (Hampel, 1974). By just adding the value of the target statistic, we obtain the $RIF\left(y_i; I(\boldsymbol{y})\right) = I\left(\boldsymbol{y}\right) + IF\left(y_i; I(\boldsymbol{y})\right)$, where the expected value is the target statistic.

[14] The *IF* for the Gini index was first documented in Monti (1991).

and only the coefficients (i.e. their impact on inequality) changed. The characteristics effect, $\left(\bar{\mathrm{X}}^{1'}-\bar{\mathrm{X}}^{0'}\right)\beta^1$, is the compositional effect and indicates the expected change in inequality induced by changes in the average characteristics, evaluated with the coefficients estimated in final year, β^1.

Therefore, the evaluation of the individual contribution of each variable x_k to the characteristics and coefficients effects can be measured as $W_k^{\Delta X}=\left(\bar{x}_k^1-\bar{x}_k^0\right)\beta_k^1$ and $W_k^{\Delta\beta}=\bar{x}_k^0\left(\beta_k^1-\beta_k^0\right)$, so that the individual effects sum up the corresponding aggregate effects. Similarly, the sums of the characteristics and the coefficients effects of each characteristic add up to the total contribution of that same characteristic, $W_k^{\Delta X\beta}=W_k^{\Delta X}+W_k^{\Delta\beta}$. Note that when the target statistic is the average of y, this procedure would lead to the one proposed by Blinder (1973) and Oaxaca (1973).

The detailed coefficients effects, however, suffer from a well-known identification problem (Oaxaca and Ransom, 1999). The contribution of each dummy variable depends on which is the omitted category, and the contribution of a continuous variable depends on the chosen scale. Although there are some proposals in the literature suggesting a normalisation of the coefficients of dummies to assure that the detailed effects do not vary with a change in the omitted category, we do not make any correction because all these adjustments are ad hoc (Fortin *et al.*, 2011). Thus, the results should be interpreted for a given specification of the model. Neither the detailed characteristics effects nor the aggregate coefficients and characteristics effects are affected by this identification problem.

Alternatively, a different counterfactual can be derived, $I^{01}(\boldsymbol{y})=\bar{\mathrm{X}}^{1'}\beta^0$, changing the decomposition into characteristics and coefficients effects:

$$I^1(y)-I^0(y)=\bar{\mathrm{X}}^{1'}\beta^1-\bar{\mathrm{X}}^{0'}\beta^0=\bar{\mathrm{X}}^{1'}(\beta^1-\beta^0)+(\bar{\mathrm{X}}^{1'}-\bar{\mathrm{X}}^{0'})\beta^0 \tag{4}$$

The difference between this decomposition and that in **(3)** is that now the coefficients effect is valued with the final average characteristics $\bar{\mathrm{X}}^1$, while the characteristics effect uses the initial coefficients β^0. Thus, we can interpret the characteristics effect as the expected change in inequality if only characteristics had changed over time (but not the coefficients), and the coefficients effect as the change in inequality after changing those effects in the final year (while keeping the final average characteristics).

5. EXPLAINING THE INEQUALITY TRENDS

We now investigate the trends of inequality in Mozambique in two steps. We first identify the extent to which household characteristics are associated with inequality. Those attributes, ceteris paribus, with higher impact on consumption at the extremes of the distribution, especially at the very top, will tend to be more strongly associated with higher inequality. Then, we estimate their contribution to the increase in inequality over time, either through a compositional effect (changes in the proportions) or through a structural effect (change in their relationship with inequality, i.e. the coefficients).

5.1 Household Characteristics and Inequality

The RIF regressions, reported in Table 1, show that inequality in 2014/15 tends to be strongly increasing with the proportion of people living in Maputo City, and to a lower

Table 1. RIF regressions, 1996–2014

	1996/97		2002/03		2002/03		2008/09		2014/15	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Area										
Urban 1996	0.055*	0.022	−0.020	0.032	–	–	–	–	–	–
Urban	–	–	–	–	0.053*	0.026	0.031	0.021	0.053**	0.017
Province										
Niassa	−0.048	0.029	0.003	0.028	0.014	0.029	0.168***	0.049	−0.091**	0.032
Cabo Delgado	−0.014	0.034	0.085	0.063	0.093	0.067	0.055*	0.026	−0.116***	0.031
Nampula	−0.009	0.033	−0.011	0.026	−0.012	0.026	0.118**	0.038	−0.086*	0.034
Zambezia	−0.063*	0.027	0.002	0.025	0.017	0.028	0.120***	0.030	−0.090**	0.031
Tete	−0.012	0.027	0.036	0.024	0.047	0.026	0.058*	0.026	−0.129***	0.031
Manica	0.026	0.037	0.015	0.027	0.020	0.028	0.050*	0.024	−0.109***	0.032
Sofala	0.060*	0.027	0.090*	0.037	0.092*	0.038	0.142***	0.026	−0.034	0.034
Inhambane	−0.008	0.027	0.112***	0.024	0.127***	0.026	0.111***	0.025	−0.059	0.032
Gaza	−0.026	0.031	0.015	0.029	0.025	0.030	0.143***	0.025	−0.032	0.031
Maputo City	0.005	0.042	0.108**	0.038	0.088*	0.037	0.184***	0.038	0.413***	0.066
Household size										
N. adults	0.002	0.004	−0.001	0.004	−0.001	0.004	−0.001	0.006	−0.027***	0.005
N. children	−0.004	0.004	−0.009*	0.004	−0.009*	0.004	−0.009*	0.004	−0.008**	0.003
Age (head)										
25–34	−0.029	0.027	0.033	0.032	0.034	0.033	0.046	0.024	−0.02	0.017
35–44	0.000	0.028	0.04	0.033	0.04	0.033	0.064*	0.025	0.035	0.018
45–54	−0.004	0.028	0.058	0.031	0.057	0.031	0.089***	0.024	0.065**	0.024
55 or older	0.009	0.027	0.096**	0.031	0.096**	0.031	0.081***	0.023	0.071**	0.024
Sex (head)										
Female	0.012	0.025	0.010	0.019	0.006	0.019	0.016	0.020	−0.015	0.025
Marital status (head)										
Single	0.082*	0.037	0.144*	0.059	0.140*	0.059	0.215	0.118	0.097*	0.044
Divorced	0.002	0.026	0.031	0.021	0.025	0.021	0.003	0.020	−0.021	0.028
Education (head): Attained education										
Some/lower primary	0.014	0.016	0.021	0.018	0.013	0.018	−0.018	0.010	−0.030***	0.009
Upper primary	0.126***	0.036	0.139*	0.064	0.122*	0.058	0.025	0.024	−0.001	0.013
Lower secondary	0.454***	0.100	0.342***	0.079	0.333***	0.078	0.168*	0.078	0.114***	0.025
Upper secondary	0.478*	0.241	0.847***	0.165	0.826***	0.163	0.456***	0.083	0.455***	0.069
Technical	0.506***	0.137	0.641***	0.148	0.628***	0.147	0.412***	0.111	0.558***	0.095
Higher	2.071***	0.492	3.061**	0.972	3.063**	0.969	1.738***	0.325	1.690***	0.150
Literate	−0.013	0.012	0.021	0.012	0.019	0.012	−0.002	0.010	−0.019**	0.007
Employment: Type (head)										
Public sector	−0.049	0.033	−0.143*	0.070	−0.136*	0.069	−0.154***	0.047	−0.409***	0.061
Self-employed	0.017	0.025	0.007	0.043	0.016	0.043	0.005	0.035	0.017	0.014
Sector[+] (head)										
Subsistence	−0.006	0.031	−0.057	0.051	−0.058	0.051	−0.063	0.053	−0.066*	0.028
Non-subsistence	0.037	0.036	0.047	0.038	0.027	0.038	0.021	0.043	−0.059*	0.028
Employment rate (household)	−0.027	0.028	0.118**	0.042	0.141**	0.048	0.102	0.053	0.050	0.027
Intercept	0.404***	0.042	0.230***	0.052	0.188**	0.062	0.186***	0.056	0.572***	0.041
N Observations	42,143		44,083		44,083		51,175		164,359	
R^2	5.0		8.0		8.0		10.7		7.6	
F	7.25***		9.08***		9.26***		7.49***		14.01***	

Note: p-values: * < 0.05; ** < 0.01; *** < 0.001. [+]A category was included to indicate that the head's industry was missing.
Source: Authors' calculations based on IAF/IOF.

extent in other urban areas. This points to the fact that inequality in Mozambique is closely related with higher inequality in urban areas (higher than in other African countries, see Fox *et al.*, 2005) and to the large urban-rural gap, even after controlling for

other characteristics like education or predominance of the subsistence sector. While inequality in rural areas is 0.373, it is 0.552 in urban areas, with the highest level of 0.582 in Maputo City, in contrast with the lowest level of 0.312 in rural Tete. There is also a large gap between the average real consumption of urban and rural areas: 1.3 times the poverty line in rural areas versus 2.4 in urban areas, with the highest level in Maputo (4.5) and the lowest in rural Niassa (1.0).

Inequality in 2014/15 tends to decline with the average number of household members (especially, adults), and to increase with the proportion of people living in households in which the head is older or single and, especially, has attained upper secondary or higher education. The education effect is again the result of higher between-group gaps, with average real consumption 7.6 times the poverty line when the household head has higher education, compared with only 1.2 when they have less than primary education. It is also the result of higher education having more within-group inequality. The Gini index is 0.566 among those with a head with higher education, and 0.379 when the head has only achieved lower primary education.

Regarding the labour market status, inequality is reduced with the employment of the household heads in the subsistence sector and, especially, in the public sector, and increases with the employment rate of household members. There is a major difference in the average consumption by sector (2.5 times the poverty line if the head works in the non-subsistence sector; 1.2 in the subsistence sector), and in within-group inequality as well (Gini is 0.512 versus 0.361, respectively). These results do however seem to vanish after controlling for other characteristics like education or area of residence.

Some of the above effects have intensified over time, especially the dis-equalising effect associated with the proportion of people living in Maputo City, and the equalising effect of the head working in the public sector. The dis-equalising effect of having some college education in increasing inequality declined after 2002/03.

At the same time, there was a change in the composition of households by characteristics over time (Table 2). There was a redistribution of population by provinces (with population increases in Tete and Manica, and declines in Sofala, Inhambane, Gaza or Maputo City). This was accompanied by a decline in the average number of adults, an increase in the average number of children and in the proportion of people living in households with middle-aged, divorced or female heads. There was also a general increase in attained education of household heads, along a reduction of self-employed and workers in the public sector (from 11 to 6%) or in the subsistence sector (from 70 to 62%), all reflecting a timid higher development and diversification of the modern sector of the economy after the end of the war and the economic growth that followed (e.g. Jones and Tarp, 2016), along the expansion of the educational system (e.g. van der Berg *et al.*, 2017).

5.2 Decomposing Changes in Inequality

In the previous section, we established the trend towards higher inequality that was the combined effect of changes in the characteristics and the marginal impact they had on

Table 2. Distribution of characteristics, 1996/97–2014/15. Proportion of the population, except for household size

Area	1996/97	2002/03	2008/09	2014/15
Urban (1996–2002)	0.210	0.198	–	–
Urban (2002–2014)	–	0.321	0.304	0.317
Province				
Niassa	0.050	0.051	0.059	0.064
Cabo Delgado	0.077	0.084	0.078	0.074
Nampula	0.188	0.188	0.192	0.195
Zambezia	0.193	0.192	0.190	0.188
Tete	0.068	0.077	0.090	0.098
Manica	0.057	0.067	0.070	0.075
Sofala	0.101	0.084	0.081	0.079
Inhambane	0.073	0.074	0.061	0.058
Gaza	0.070	0.070	0.063	0.055
Maputo province	0.057	0.056	0.063	0.066
Maputo city	0.066	0.057	0.052	0.049
Household size				
N. adults	3.150	3.122	2.844	2.994
N. children	3.050	3.094	3.112	3.224
Age (head)				
Less than 24	0.068	0.061	0.064	0.060
25–34	0.234	0.255	0.265	0.224
35–44	0.264	0.269	0.264	0.289
45–54	0.216	0.198	0.212	0.211
55 or older	0.218	0.217	0.196	0.217
Sex (head)				
Female	0.174	0.205	0.242	0.242
Marital status (head)				
Married, union (or unknown)	0.850	0.820	0.818	0.808
Single	0.028	0.015	0.015	0.032
Divorced, separated, widow(er)	0.122	0.166	0.166	0.160
Education (head):				
Attained education				
None/unknown	0.690	0.697	0.255	0.315
Some/lower primary	0.242	0.177	0.552	0.439
Upper primary	0.051	0.069	0.126	0.139
Lower secondary	0.009	0.031	0.031	0.041
Upper secondary	0.002	0.015	0.016	0.033
Technical	0.005	0.008	0.008	0.007
Higher	0.001	0.003	0.012	0.025
Literate	0.522	0.544	0.553	0.568
Employment:				
Type (head)				
Public sector	0.112	0.077	0.063	0.058
Self-employed	0.719	0.797	0.784	0.685
Sector (head)				
Non-employed	0.073	0.043	0.038	0.010
Subsistence	0.700	0.688	0.714	0.617
Non–subsistence	0.219	0.268	0.248	0.283
Missing sector	0.008	0.001	0.001	0.000
Employment rate (household)	0.805	0.834	0.881	0.782

Source: Authors' calculations based on IAF/IOF.

inequality. Table 3 reports the decomposition of the change in the overall inequality over time into the characteristics and coefficients effects following the approach previously described. It turns out that the increase in the Gini index between 1996/1997 and

Table 3. Decomposition of the increase in Gini inequality, 1996/97–2014/15

Final Gini	**1996/97–2014/15**		**2002/03–20014/15**		**1996/97–2002/03**		**2002/03–08/09**		**2008/09–14/15**	
	0.468*** (0.006)		0.468*** (0.006)		0.415*** (0.008)		0.415*** (0.007)		0.468*** (0.006)	
Initial Gini	0.397*** (0.006)		0.415*** (0.008)		0.397*** (0.006)		0.415*** (0.008)		0.415*** (0.007)	
Change in Gini	0.071*** (0.008)		0.052*** (0.010)		0.018 (0.010)		0.000 (0.010)		0.053*** (0.009)	
	Char. E	**Coef. E**	**Char. E**	**Coef. E**	**Char. E**	**Coef. E**	**Char. E**	**Coef. E**	**Char. E**	**Coef. E**
Total Effect	0.070*** (0.010)	0.001 (0.010)	0.045*** (0.008)	0.007 (0.010)	0.037*** (0.008)	−0.019* (0.008)	0.015* (0.007)	−0.015 (0.011)	0.031*** (0.005)	0.021** (0.008)
Area	0.006** (0.002)	−0.001 (0.006)	0.000 (0.000)	0.000 (0.010)	0.000 (0.000)	−0.016 (0.008)	−0.001 (0.000)	−0.007 (0.011)	0.001 (0.000)	0.006 (0.008)
Province	−0.012*** (0.002)	−0.032 (0.038)	−0.006** (0.002)	−0.089* (0.037)	−0.001 (0.001)	0.047 (0.032)	−0.002 (0.001)	0.068* (0.032)	−0.002 (0.001)	−0.160*** (0.036)
Household size										
N adults	0.004** (0.001)	−0.092*** (0.020)	0.003** (0.001)	−0.081*** (0.020)	0.000 (0.000)	−0.008 (0.018)	0.000 (0.002)	−0.001 (0.023)	−0.004*** (0.001)	−0.075** (0.022)
N children	−0.001* (0.001)	−0.010 (0.014)	−0.001 (0.001)	0.003 (0.016)	0.000 (0.001)	−0.015 (0.017)	0.000 (0.001)	−0.002 (0.019)	−0.001 (0.000)	0.005 (0.016)
Age (head)	0.001 (0.001)	0.040 (0.029)	0.002* (0.001)	−0.019 (0.032)	0.000 (0.001)	0.057 (0.036)	0.000 (0.001)	0.013 (0.034)	0.003** (0.001)	−0.032 (0.026)
Sex (head)	−0.001 (0.002)	−0.005 (0.006)	−0.001 (0.001)	−0.004 (0.006)	0.000 (0.001)	0.000 (0.005)	0.001 (0.001)	0.002 (0.006)	0.000 (0.000)	−0.008 (0.008)
Marital status (head)										
Single	0.000 (0.000)	0.000 (0.002)	0.002* (0.001)	−0.001 (0.001)	−0.002* (0.001)	0.002 (0.002)	0.000 (0.000)	0.001 (0.002)	0.002* (0.001)	−0.002 (0.002)
Divorced	−0.001 (0.001)	−0.003 (0.005)	0.000 (0.000)	−0.008 (0.006)	0.001 (0.001)	0.004 (0.004)	0.000 (0.000)	−0.004 (0.005)	0.000 (0.000)	−0.004 (0.006)
Education[+] (head)	0.052*** (0.007)	−0.024** (0.007)	0.038*** (0.006)	−0.054*** (0.011)	0.027*** (0.005)	0.022* (0.011)	0.011 (0.006)	−0.040** (0.012)	0.034*** (0.004)	−0.021 (0.011)
Employment: Type (head)										
Public s. (head)	0.022*** (0.004)	−0.040*** (0.008)	0.008** (0.002)	−0.021** (0.007)	0.005 (0.003)	−0.010 (0.009)	0.002 (0.001)	−0.001 (0.006)	0.002 (0.002)	−0.016** (0.005)
Self-employed (head)	−0.001 (0.000)	−0.001 (0.021)	−0.002 (0.002)	0.000 (0.036)	0.001 (0.003)	−0.007 (0.036)	0.000 (0.000)	−0.009 (0.044)	−0.002 (0.001)	0.009 (0.029)
Sector (head)										
Subsistence S. (head)	0.005* (0.002)	−0.042 (0.029)	0.005* (0.002)	−0.005 (0.040)	0.001 (0.001)	−0.036 (0.042)	−0.002 (0.001)	0.003 (0.051)	0.006* (0.003)	−0.002 (0.042)
Non-subs. (head)	−0.004 (0.002)	−0.021* (0.010)	−0.001 (0.001)	−0.023 (0.013)	0.002 (0.002)	0.002 (0.011)	0.000 (0.001)	−0.001 (0.015)	−0.002 (0.001)	−0.020 (0.013)
Employment rate	−0.001 (0.001)	0.062* (0.032)	−0.003 (0.001)	−0.075 (0.046)	0.003* (0.001)	0.117** (0.041)	0.005 (0.003)	−0.032 (0.059)	−0.005 (0.003)	−0.046 (0.052)
Intercept		0.168** (0.059)		0.385*** (0.075)		−0.174** (0.067)		−0.002 (0.084)		0.387*** (0.070)

Notes: p-values: * <0.05; ** <0.01; *** <0.001. Robust standard errors in parentheses below. [+] Education and literacy.
Source: Authors' calculations based on IAF/IOF.

2014/2015 can be mostly explained by a compositional effect evaluated with the latest survey's estimated coefficients.[15] Even if the initial high level of inequality in an underdeveloped country like Mozambique does not fit very well in the Kuznets hypothesis, the increase in inequality does, however, because it went along the emergence of a more diversified and skilled modern sector of the economy.

Indeed, the entire increase in inequality can be explained by the higher education of household heads (0.053 or 75% of the total change) and the declining public sector (0.022 or 31%).[16] In the same line of reasoning, other factors that significantly contributed to increasing inequality were the declining employment in the subsistence sector (7%) and the smaller average number of adults per household (6%) or the larger share of single heads in the population (2%).[17] These inequality-enhancing changes in characteristics were compensated by other changes that helped mitigate the increase. They include changes in the distribution of the population by province (with a contribution of –17%), or the increase in the average number of children per household (–2%).

Apart from these compositional changes, there were also structural changes in the relationship between these characteristics and inequality. The net coefficients or unexplained effect is negligible and statistically insignificant. However, this is the result of some negative and significant effects compensated by a larger intercept. More specifically, we find significant and substantial negative coefficients effects associated with heads' education, heads working in the public and non-subsistence sectors, and the number of adults. These effects are the result of these characteristics being associated with less inequality in 2014/2015 compared with 1996/1997. This is consistent with the regressions of (log-)consumption on the same set of characteristics showing returns to attained education of the head in 2014/2015 lower than in 1996/1997 (but slightly higher than in 2008/2009; see Table A8). That is, the impact on inequality of higher education or a smaller public sector was mitigated by these facts becoming less dis-equalising over time. The only positive and significant effect is associated with the household employment rate, a dis-equalising factor in 2014/2015 that had an equalising effect in 1996/1997.

A closer look at the decomposition in Table 3 brings out the fact that education played a fundamental role in explaining increasing inequality in all periods, reflecting a consolidated long-term trend. The effect of education on inequality was larger than the

[15] The characteristics effect explains 99% of the increase in inequality, although 8 percentage points are due to the change in the proportion of urban population, driven by a change in the definition of the variable. The other 91 percentage points are reliable because the impact of the change in the definition of area on the other coefficients is small in 2002/03 (Table 1). Furthermore, the decomposition is consistent with the findings from comparing every pair of consecutive surveys or the changes between 2002/03 and 2014/15, using comparable definitions of area of residence (Table 3). In the latter case, the compositional effect accounts for 87% of the increase in inequality.

[16] Odusola *et al.* (2017) included the public sector among the skilled labour sectors that tend to raise inequality in sub-Saharan countries (along mining, finance, insurance and the real estate). In the Mozambican case, it seems that it was the reduction in this sector that contributed to increase inequality, instead.

[17] While the difference in the proportion of urban population contributes to 8%, we know that the variables are not entirely comparable in both years, and the changes between comparable years point to this factor not being especially relevant to explain the increasing inequality.

increase in inequality observed in 1996/1997–2002/2003, and it explained 64% of the rise between 2008/2009 and 2014/2015. Nevertheless, the absolute increase in the last period (0.034) was larger than the contribution during the first period (0.027). In the last period, other factors significantly contributed to increasing inequality, like the decline in the subsistence sector (12%) and some demographic changes (higher proportion of single heads, 3%, or age structure, 6%). The reduction in the number of adults contributed to reducing inequality (by 8%). Regarding the coefficients effect, we see that the effect of the household employment rate occurred in the first period. The negative coefficients effect of education took place in the intermediate period, when education became less associated with inequality (as opposed to the positive effect during the first period, and the negative but statistically not significant effect in the last one). The coefficients effect associated with the average number of adults in the household and with the share with heads employed in the public sector occurred in the last period, however, due to an important increase in the equalising effects associated with both characteristics (that followed the reduction in their average values).

The results are robust to some changes in the approach. Table A6 in the Appendix shows that the results for the 1996/97–2014/15 period (using the RIF regressions reported in Table A5) are very similar had we used nominal instead of real consumption. The increase in inequality (0.089) can be explained by the combination of higher education (0.061) and the decline in public (0.026) and subsistence sectors (0.05). However, in this case, the total explained component is around 82% of the total change due to a larger unexplained effect (captured by the intercept).

Finally, with the alternative counterfactual (Table A7) in which we evaluate the change in characteristics using the initial values of the coefficients, the explained effect for the increase in real consumption between 1996/97 and 2014/15 is even larger (higher than 100%[18]), with a much stronger contribution from education (due to the more disequalising effect of this characteristic in 1996/97) and a weaker contribution from the sectoral composition (because of its smaller equalising effect in the initial year). The coefficients effects valued using the final characteristics are very similar to the previous case, when the initial ones were used (the educational coefficients effect is stronger, though).

6. CONCLUDING REMARKS

In this paper, we have investigated the trend in consumption inequality in Mozambique since the end of the post-independence violent conflict. We have shown that the growth pattern that led to a reduction in poverty over time went along with a substantial increase in inequality, especially in most recent years. This was due to consumption disproportionally increasing among the better-off.

This increase in inequality, in line with the classical predictions for initial stages in the development of dualistic economies, can be explained as the result of the emergence of

[18] The difference with the previous counterfactual is that in this case the change in characteristics is evaluated using the initial coefficients (generally associated with higher inequality for the same characteristics). This implies that the aggregate coefficients effect (evaluated with the final characteristics) is negative, indicating that if characteristics in 1996/97 were the same as in 2014/15, inequality would have been reduced over time.

an increasingly skilled population working in the small but expanding non-subsistence private sector of the economy. The impact of the enhancement of this class was curbed by its weaker association with inequality in consumption, mitigating the final increase in inequality. However, initial inequality levels are too high to fully fit in the Kuznets's story, and the growth path predominant in the sub-Saharan region is quite different from the one followed by other countries, due to its much weaker manufacturing industry, its strong dependence on natural resources and its emerging service sector characterised by low productivity (e.g. Addison *et al*., 2017). In this context, rising inequality is the most likely result in economies with growth taking place in sectors characterised by high asset concentration, high capital absorption and skilled labour intensity, such as mining, finance, insurance and real estate (Odusola *et al*., 2017). The opposite would be expected if growth were based in labour-intensive sectors such as manufacturing, construction and agriculture.

Growing inequality occurs in an already unequal country with a large divide between urban and rural areas and among regions, with a limited redistributive capacity of the state. This raises legitimate concerns about the implications of the current distributional growth pattern if it accentuates the duality of the economy, especially when the country is still facing major challenges in improving the living conditions for most of its population, nearly half of which remains below the poverty line. For fulfilling the "no one left behind" target encouraged by the sustainable development goals, Mozambique needs to accelerate the expansion of education. This expansion should reach, especially, the least developed rural communities to improve their productivity and living conditions above the average, helping to narrow the large urban-rural gap.

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APPENDIX

Table A1. Inequality indices and quantiles (real per capita consumption, divided by the poverty line)

	Level				Change (%)			
	1996/97	**2002/03**	**2008/09**	**2014/15**	**1996/2002**	**2002/2008**	**2008/2014**	**1996/2014**
Mean	0.972	1.315	1.329	1.613	35.2	1.1	21.4	65.9
Quantiles								
*p*5	0.254	0.333	0.316	0.337	31.2	–5.0	6.6	32.8
*p*10	0.329	0.427	0.417	0.445	29.8	–2.2	6.7	35.5
*p*25	0.485	0.630	0.637	0.683	29.9	1.1	7.2	40.8
*p*50	0.726	0.958	0.977	1.069	31.9	2.0	9.5	47.4
*p*75	1.114	1.471	1.518	1.699	32.0	3.2	12.0	52.5
*p*90	1.721	2.320	2.318	2.781	34.8	–0.1	20.0	61.6
*p*95	2.356	3.170	3.138	4.086	34.6	–1.0	30.2	73.4
Inequality								
*p*50/*p*10	2.2	2.2	2.3	2.4	1.7	4.2	2.7	8.8
*p*90/*p*50	2.4	2.4	2.4	2.6	2.2	–2.0	9.6	9.7
Gini	0.397 (0.002)	0.415 (0.004)	0.415 (0.003)	0.468 (0.002)	4.6	–0.1[#]	12.7	17.8
GE(−2)	0.565 (0.012)	0.679 (0.025)	1.127 (0.064)	15.068 (4.775)	20.2	65.9	1237.9	2568.5
GE(−1)	0.322 (0.004)	0.357 (0.007)	0.409 (0.008)	0.532(0.016)	10.8	14.4	30.2	65.2
GE(0)	0.268 (0.003)	0.297 (0.007)	0.303 (0.005)	0.381 (0.004)	10.7	2.2[#]	25.7	42.3
GE(1)	0.313 (0.006)	0.380 (0.016)	0.367 (0.010)	0.520(0.013)	21.1	–3.4[#]	41.8	66.0
GE(2)	0.601 (0.031)	1.132 (0.162)	0.887 (0.061)	2.242 (0.322)	88.5	–21.6[#]	152.8	273.4
A(.1)	0.030 (0.001)	0.036 (0.001)	0.035 (0.001)	0.049 (0.001)	19.0	–2.7[#]	38.7	60.7
A(.25)	0.072 (0.001)	0.084 (0.003)	0.082 (0.002)	0.111 (0.002)	16.4	–1.7[#]	34.7	54.0
A(.5)	0.133 (0.002)	0.151 (0.004)	0.150 (0.003)	0.194 (0.003)	13.1	–0.4[#]	29.2	45.5
A(.75)	0.187 (0.002)	0.207 (0.005)	0.209 (0.003)	0.261 (0.003)	10.8	0.8[#]	24.8	39.3
A(.9)	0.216 (0.002)	0.238 (0.005)	0.241 (0.004)	0.295 (0.003)	9.8	1.4[#]	22.5	36.5
A(1)	0.235 (0.003)	0.257 (0.005)	0.262 (0.004)	0.317 (0.003)	9.2	1.9[#]	21.1	34.8
A(2)	0.392 (0.003)	0.417 (0.005)	0.450 (0.005)	0.516 (0.008)	6.3	7.9	14.6	31.6

Note: $A(\varepsilon)$= Atkinson family; $GE(\alpha)$ = Generalised Entropy family. Bootstrap standard error in parentheses (500 replications). ([#]) Statistically not significant at 95%; the rest of the changes in Gini, Atkinson and GE indices are statistically significant (bias-corrected confidence intervals).
Source: Authors' calculations based on IAF/IOF.

Table A2. Inequality indices (real equivalised consumption using square root of the household size)

	Level				Change (%)			
	1996/97	**2002/03**	**2008/09**	**2014/15**	**1996/2002**	**2002/2008**	**2008/2014**	**1996/2014**
$p50/p10$	2.1	2.1	2.3	2.3	2.2	8.7	0 pt	14.0
$p90/p50$	2.1	2.4	2.3	2.5	12.1	−6.2	9.1	14.8
Gini	0.373	0.405	0.397	0.439	8.6	−2.1	10.6	17.6
$GE(-2)$	0.431	0.579	0.820	10.221	34.5	41.6	1146	2274
$GE(-1)$	0.271	0.327	0.357	0.481	20.7	9.3	34.7	77.6
$GE(0)$	0.237	0.279	0.277	0.336	17.6	−0.9	21.6	41.7
$GE(1)$	0.285	0.346	0.332	0.431	21.1	−3.8	29.7	51.1
$GE(2)$	0.529	0.761	0.751	1.419	43.9	−1.4	88.9	168.0
$A(.1)$	0.028	0.033	0.032	0.041	20.2	−3.8	28.1	48.2
$A(.25)$	0.065	0.078	0.075	0.095	19.1	−3.5	25.9	44.7
$A(.5)$	0.121	0.142	0.138	0.169	17.5	−2.9	22.9	40.3
$A(.75)$	0.169	0.196	0.192	0.232	16.3	−1.9	20.3	37.3
$A(.9)$	0.195	0.225	0.222	0.265	15.6	−1.2	19.0	35.9
$A(1)$	0.211	0.244	0.242	0.286	15.3	−0.8	18.2	35.2
$A(2)$	0.351	0.396	0.417	0.491	12.5	5.4	17.7	39.6

Note: $A(\varepsilon)$ = Atkinson family; $GE(\alpha)$ = Generalised Entropy family.
Source: Authors' calculations based on IAF/IOF.

Table A3. Inequality indices (nominal per capita consumption)

	Level				Change (%)			
	1996/97	**2002/03**	**2008/09**	**2014/15**	**1996/2002**	**2002/2008**	**2008/2014**	**1996/2014**
$p50/p10$	2.3	2.3	2.5	2.6	−0.9	7.9	3.5	10.6
$p90/p50$	2.7	2.7	2.6	3.2	−0.5	−1.9	20.9	18.0
Gini	0.448	0.471	0.460	0.537	5.1	−2.3	16.7	19.8
$GE(-2)$	0.781	0.921	1.601	21.23	17.9	73.9	1226	2618
$GE(-1)$	0.419	0.460	0.513	0.734	9.7	11.5	43.2	75.1
$GE(0)$	0.341	0.380	0.371	0.505	11.4	−2.4	35.9	47.8
$GE(1)$	0.416	0.520	0.465	0.701	25.2	−10.7	50.8	68.5
$GE(2)$	0.966	2.008	1.315	3.166	107.8	−34.5	141	228
$A(.1)$	0.040	0.049	0.044	0.065	22.5	−9.6	47.6	63.5
$A(.25)$	0.094	0.111	0.102	0.147	19.2	−8.1	43.3	56.9
$A(.5)$	0.170	0.195	0.184	0.252	14.8	−5.9	37.2	48.3
$A(.75)$	0.234	0.262	0.252	0.332	11.7	−3.8	32.1	41.8
$A(.9)$	0.268	0.296	0.288	0.372	10.2	−2.7	29.4	38.8
$A(1)$	0.289	0.316	0.310	0.396	9.4	−2.0	27.7	37.0
$A(2)$	0.456	0.479	0.506	0.595	5.1	5.7	17.5	30.4

Note: $A(\varepsilon)$ = Atkinson family; $GE(\alpha)$ = Generalised Entropy family.
Source: Authors' calculations based on IAF/IOF.

Table A4. Inequality indices (nominal equivalised consumption using the square root of the household size)

	Level				Change (%)			
	1996/97	**2002/03**	**2008/09**	**2014/15**	**1996/2002**	**2002/2008**	**2008/2014**	**1996/2014**
$p50/p10$	2.2	2.2	2.4	2.5	0.1	11.0	2.8	14.1
$p90/p50$	2.7	2.8	2.6	3.1	2.1	−8.2	21.5	13.8
Gini	0.442	0.468	0.445	0.511	5.8	−5.0	14.9	15.6
$GE(-2)$	0.662	0.815	1.141	14.386	23.1	40.1	1161	2074
$GE(-1)$	0.388	0.440	0.456	0.671	13.4	3.6	47.3	73.1
$GE(0)$	0.330	0.371	0.345	0.456	12.6	−7.2	32.2	38.2
$GE(1)$	0.406	0.484	0.421	0.596	19.2	−13.0	41.4	46.6
$GE(2)$	0.859	1.267	1.013	2.013	47.5	−20.1	98.8	134
$A(.1)$	0.039	0.046	0.040	0.056	17.9	−12.4	39.4	43.9
$A(.25)$	0.091	0.106	0.094	0.128	16.2	−11.5	36.5	40.4
$A(.5)$	0.166	0.189	0.171	0.226	13.8	−9.8	32.3	35.9
$A(.75)$	0.228	0.255	0.235	0.303	11.9	−7.9	28.7	32.6
$A(.9)$	0.261	0.289	0.270	0.342	11.0	−6.8	26.7	31.1
$A(1)$	0.281	0.310	0.292	0.366	10.4	−6.0	25.6	30.3
$A(2)$	0.437	0.468	0.477	0.573	7.1	1.9	20.2	31.2

Note: $A(\varepsilon)$ = Atkinson family; $GE(\alpha)$ = Generalised Entropy family.
Source: Authors' calculations based on IAF/IOF.

Table A5. RIF Regressions, 1996/97–2014/15 (nominal per capita consumption)

	1996/97	**2014/15**
Area		
Urban 1996	0.081***	–
Urban	–	0.015
Province		
Niassa	−0.100*	−0.277***
Cabo Delgado	−0.095*	−0.296***
Nampula	−0.051	−0.202***
Zambezia	−0.130***	−0.205***
Tete	−0.07	−0.284***
Manica	−0.044	−0.260***
Sofala	0.007	−0.172***
Inhambane	−0.100*	−0.232***
Gaza	−0.090*	−0.206***
Maputo City	0.132*	0.548***
Household size		
N. adults	−0.002	−0.030***
N. children	−0.005	−0.006*
Age (head)		
25–34	0.022	−0.011
35–44	0.061**	0.062***
45–54	0.065**	0.090***
55 or older	0.067**	0.098***
Sex (head)		
Female	0.031	−0.022
Marital status (head)		
Single	0.087*	0.08
Divorced	−0.023	−0.033
Education (head):		
Attained education		
Some/lower primary	0.022	−0.030***

(*Continued*)

Table A5. (Continued)

	1996/97	2014/15
Upper primary	0.178***	0.012
Lower secondary	0.648***	0.152***
Upper secondary	0.941*	0.502***
Technical	0.914***	0.647***
Higher	2.902***	1.920***
Literate	0.000	−0.028***
Employment:		
Type (head)	−0.079*	−0.485***
Public sector		
Self-employed	0.044	0.026
Sector[+] (head)		
Subsistence	0.01−	−0.066*
Non-subsistence	0.051	−0.087**
Employment rate (household)	−0.051	0.068*
Intercept	0.428***	0.746***
N Observations	42,143	164,359
R^2	8.7	10.1
F	9.65***	13.08***

Note: p-values: * <0.05; ** <0.01; *** <0.001. [+]A category was included to indicate that the head's industry was missing.
Source: Authors' calculations based on IAF/IOF.

Table A6. Decomposition of the increase in Gini inequality, 1996/97–2014/15 (nominal per capita consumption)

	1996/97	2014/15
Change in Gini	0.089*** (0.009)	
	Char. E	**Coef. E**
Total Effect	0.073*** (0.011)	0.016 (0.011)
Area	0.002 (0.002)	−0.014* (0.006)
Province	−0.016*** (0.003)	−0.102* (0.051)
Household size		
N adults	0.005** (0.001)	−0.087*** (0.021)
N children	−0.001* (0.001)	−0.003 (0.015)
Age (head)	0.001 (0.001)	0.005 (0.023)
Sex (head)	−0.002 (0.002)	−0.009 (0.007)
Marital status (head)		
Single	0.000 (0.000)	0.000 (0.002)
Divorced	−0.001 (0.001)	−0.001 (0.005)
Education[+] (head)	0.061*** (0.008)	−0.044*** (0.007)
Employment:		
Type (head)		
Public s. (head)	0.026*** (0.004)	−0.045*** (0.009)
Self-employed (head)	−0.001 (0.001)	−0.013 (0.022)
Sector (head)		
Subsistence S. (head)	0.005* (0.002)	−0.053 (0.030)
Non-subs. (head)	−0.006** (0.002)	−0.030** (0.010)
Employment rate	−0.002* (0.001)	0.096** (0.034)
Intercept		0.318*** (0.069)

Notes: p-values: * <0.05; ** <0.01; *** <0.001. Robust standard errors in parentheses below.
Source: Authors' calculations based on IAF/IOF.

Table A7. Decomposition of the increase in Gini inequality, 1996/97–2014/15 (alternative counterfactual)

	1996/97	2014/15
Change in Gini	0.071*** (0.008)	
	Char. E	**Coef. E**
Total Effect	0.103*** (0.016)	−0.033 (0.019)
Area	0.006* (0.002)	−0.001 (0.009)
Province	−0.001 (0.001)	−0.043 (0.037)
Household size		
N adults	0.000 (0.001)	−0.087*** (0.019)
N children	−0.001 (0.001)	−0.011 (0.015)
Age (head)	0.000 (0.000)	0.040 (0.029)
Sex (head)	0.001 (0.002)	−0.007 (0.008)
Marital status (head)		
Single	0.000 (0.000)	0.000 (0.002)
Divorced	0.000 (0.001)	−0.004 (0.006)
Education⁺ (head)	0.093*** (0.016)	−0.064** (0.020)
Employment		
Type (head)		
Public s. (head)	0.003 (0.002)	−0.021*** (0.004)
Self-employed (head)	−0.001 (0.001)	−0.001 (0.020)
Sector (head)		
Subsistence S. (head)	0.000 (0.003)	−0.037 (0.026)
Non-subs. (head)	0.002 (0.002)	−0.027* (0.013)
Employment rate	0.001 (0.001)	0.060* (0.031)
Intercept		0.168** (0.059)

Notes: p-values: * <0.05; ** <0.01; *** <0.001. Robust standard errors in parentheses below.
Source: Authors' calculations based on IAF/IOF.

Table A8. (Log-)Real per capita consumption regressions, 1996/97–2014/15

	1996/97	2002/03	2002/03	2008/09	2014/15
Area					
Urban 1996	−0.055***	−0.088***	–	–	–
Urban	–	–	−0.107***	−0.061***	−0.119***
Province					
Niassa	−0.125***	0.346***	0.356***	0.392***	−0.557***
Cabo Delgado	0.118***	0.125***	0.138***	0.317***	−0.296***
Nampula	−0.091***	0.216***	0.240***	0.135***	−0.519***
Zambezia	−0.018	0.308***	0.315***	0.003	−0.536***
Tete	−0.261***	−0.006	0.000	0.231***	−0.217***
Manica	0.174***	0.289***	0.300***	0.055**	−0.285***
Sofala	−0.537***	0.512***	0.520***	0.004	−0.242***
Inhambane	−0.225***	−0.301***	−0.288***	0.202***	−0.359***
Gaza	0.167***	0.294***	0.305***	0.039*	−0.372***
Maputo City	0.129***	0.316***	0.311***	0.349***	0.227***
Household size					
N. adults	−0.032***	0.016***	0.016***	−0.014***	−0.001
N. children	−0.118***	−0.108***	−0.108***	−0.108***	−0.125***
Age (head)					
25–34	−0.116***	−0.060**	−0.058*	−0.006	−0.002
35–44	−0.065***	−0.093***	−0.093***	−0.014	0.062***
45–54	−0.003	−0.032	−0.03	0.026	0.068***
55 or older	−0.067***	−0.048*	−0.044	0.054**	0.076***
Sex (head)					
Female	0.026	0.094***	0.095***	0.074***	0.013*
Marital status (head)					
Single	0.038	−0.03	−0.021	0.101**	−0.008
Divorced	−0.007	−0.117***	−0.110***	−0.128***	−0.040***

(*Continued*)

Table A8. (Continued)

	1996/97	2002/03	2002/03	2008/09	2014/15
Education (head):					
Attained education					
Some/lower primary	0.131***	0.043***	0.052***	0.005	0.067***
Upper primary	0.347***	0.310***	0.322***	0.120***	0.169***
Lower secondary	0.542***	0.635***	0.650***	0.344***	0.385***
Upper secondary	0.848***	0.994***	1.008***	0.637***	0.678***
Technical	0.755***	0.873***	0.884***	0.720***	0.777***
Higher	1.390***	1.324***	1.327***	1.106***	1.229***
Literate	0.127***	0.097***	0.096***	0.168***	0.114***
Employment:					
Type (head)					
Public sector	0.014	−0.032	−0.042*	0.079***	−0.039***
Self-employed	0.084***	0.059***	0.051***	0.178***	0.039***
Sector[+] (head)					
Subsistence	−0.116***	−0.179***	−0.178***	−0.123***	−0.085***
Non-subsistence	0.139***	0.054*	0.067**	0.120***	0.168***
Employment rate (household)	0.02	0.180***	0.162***	−0.048*	0.237***
Intercept	0.151***	−0.082*	−0.063	0.042	0.451***
N Observations	42,143	44,083	44,083	51,175	164,359
R^2	30.0	27.4	27.6	24.0	34.8
F	394***	269***	268***	281***	2,026***

Note: p-values: * <0.05; ** <0.01; *** <0.001. [+] A category was included to indicate that the head's industry was missing.
Source: Authors' calculations based on IAF/IOF.

Table A9. Differentials in Lorenz curves between years

Percentile	1996/2002	2002/08	2008/14	1996/2014	percentile	1996/2002	2002/08	2008/14	1996/2014
1	0.000	0.000*	0.000	0.000***	51	0.009	0.002	0.025***	0.036***
2	0.000	0.001**	0.000	0.001***	52	0.009	0.001	0.026***	0.036***
3	0.000	0.001**	0.000	0.001***	53	0.009	0.001	0.027***	0.037***
4	0.000	0.001**	0.000	0.002***	54	0.009	0.001	0.028***	0.038***
5	0.000	0.002*	0.000	0.002***	55	0.010	0.001	0.028***	0.039***
6	0.001	0.002*	0.001	0.003***	56	0.010	0.001	0.029***	0.040***
7	0.001	0.002*	0.001	0.003***	57	0.010	0.001	0.030***	0.041***
8	0.001	0.002*	0.001*	0.004***	58	0.010	0.001	0.031***	0.042***
9	0.001	0.002*	0.002*	0.005***	59	0.010	0.001	0.032***	0.043***
10	0.001	0.002*	0.002**	0.005***	60	0.011	0.000	0.033***	0.044***
11	0.001	0.002*	0.002**	0.006***	61	0.011	0.000	0.033***	0.045***
12	0.001	0.002*	0.003**	0.006***	62	0.011	0.000	0.034***	0.045***
13	0.002	0.002*	0.003**	0.007***	63	0.011	0.000	0.035***	0.046***
14	0.002	0.002	0.004**	0.008***	64	0.011	0.000	0.036***	0.047***
15	0.002	0.002	0.004**	0.009***	65	0.012	**−0.001**	0.037***	0.048***
16	0.002	0.002	0.005***	0.009***	66	0.012	**−0.001**	0.038***	0.049***
17	0.002	0.002	0.005***	0.010***	67	0.013	**−0.001**	0.039***	0.050***
18	0.002	0.003	0.006***	0.011***	68	0.013	**−0.001**	0.039***	0.051***
19	0.002	0.003	0.006***	0.011***	69	0.013	**−0.002**	0.040***	0.052***
20	0.003	0.003	0.006***	0.012***	70	0.013	**−0.002**	0.041***	0.053***
21	0.003	0.003	0.007***	0.013***	71	0.014	**−0.002**	0.042***	0.053***
22	0.003	0.003	0.007***	0.013***	72	0.014	**−0.002**	0.043***	0.054***
23	0.003	0.003	0.008***	0.014***	73	0.014	**−0.003**	0.044***	0.055***
24	0.004	0.003	0.009***	0.015***	74	0.015	**−0.003**	0.044***	0.056***
25	0.004	0.003	0.009***	0.016***	75	0.015	**−0.003**	0.045***	0.057***
26	0.004	0.003	0.010***	0.016***	76	0.015	**−0.003**	0.046***	0.058***
27	0.004	0.003	0.010***	0.017***	77	0.015	**−0.003**	0.047***	0.059***
28	0.004	0.003	0.011***	0.018***	78	0.016	**−0.004**	0.048***	0.060***
29	0.005	0.003	0.011***	0.019***	79	0.017*	**−0.004**	0.049***	0.061***
30	0.005	0.003	0.012***	0.019***	80	0.017	**−0.005**	0.050***	0.061***
31	0.005	0.003	0.012***	0.020***	81	0.017	**−0.005**	0.051***	0.062***
32	0.005	0.003	0.013***	0.021***	82	0.017	**−0.005**	0.051***	0.063***
33	0.005	0.003	0.013***	0.021***	83	0.017	**−0.005**	0.052***	0.064***
34	0.005	0.003	0.014***	0.022***	84	0.017	**−0.005**	0.053***	0.065***
35	0.005	0.003	0.015***	0.023***	85	0.017	**−0.005**	0.053***	0.065***
36	0.006	0.003	0.015***	0.023***	86	0.017	**−0.006**	0.054***	0.066***
37	0.006	0.003	0.016***	0.024***	87	0.017	**−0.006**	0.055***	0.066***
38	0.006	0.003	0.016***	0.025***	88	0.018	**−0.006**	0.055***	0.067***
39	0.006	0.002	0.017***	0.026***	89	0.018	**−0.006**	0.056***	0.068***
40	0.006	0.002	0.018***	0.027***	90	0.017	**−0.005**	0.056***	0.068***
41	0.007	0.002	0.018***	0.027***	91	0.018	**−0.006**	0.056***	0.069***
42	0.007	0.002	0.019***	0.028***	92	0.018	**−0.006**	0.056***	0.069***
43	0.007	0.002	0.020***	0.029***	93	0.018	**−0.006**	0.056***	0.068***
44	0.007	0.002	0.020***	0.030***	94	0.019	**−0.006**	0.055***	0.068***
45	0.008	0.002	0.021***	0.031***	95	0.019	**−0.006**	0.054***	0.067***
46	0.008	0.002	0.022***	0.031***	96	0.019	**−0.005**	0.052***	0.066***
47	0.008	0.002	0.022***	0.032***	97	0.021*	**−0.005**	0.049***	0.065***
48	0.008	0.002	0.023***	0.033***	98	0.021*	**−0.003**	0.044***	0.063***
49	0.008	0.002	0.024***	0.034***	99	0.022**	**−0.001**	0.035***	0.055***
50	0.009	0.002	0.025***	0.035***					

Note: p-values: * <0.05; ** <0.01; *** <0.001 (bootstrap standard errors).
Source: Authors' calculations based on IAF/IOF.

Table A10. Daily consumption shares (deciles, quintiles and top 5%) with standard errors

	Per capita								Equivalised (square root of household size)							
	1996/97		2002/03		2008/09		2014/15		1996/97		2002/03		2008/09		2014/15	
Real*	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**
D1	2.49	0.02	2.40	0.03	2.18	0.02	1.97	0.01	2.80	0.02	2.57	0.03	2.31	0.02	2.13	0.01
D2	3.95	0.03	3.77	0.04	3.72	0.03	3.28	0.02	4.32	0.03	3.98	0.03	3.92	0.03	3.54	0.02
D3	4.97	0.03	4.77	0.04	4.75	0.03	4.23	0.02	5.31	0.03	4.92	0.04	5.01	0.03	4.54	0.02
D4	5.87	0.03	5.70	0.05	5.75	0.04	5.15	0.02	6.26	0.03	5.81	0.04	6.02	0.04	5.50	0.02
D5	6.92	0.04	6.71	0.06	6.78	0.04	6.10	0.03	7.22	0.04	6.74	0.04	7.02	0.04	6.50	0.02
D6	8.08	0.04	7.88	0.06	8.00	0.05	7.19	0.03	8.28	0.04	7.85	0.05	8.20	0.05	7.59	0.03
D7	9.48	0.05	9.19	0.07	9.43	0.05	8.59	0.04	9.58	0.04	9.19	0.06	9.62	0.05	8.95	0.03
D8	11.50	0.05	11.19	0.08	11.46	0.07	10.60	0.05	11.27	0.05	11.12	0.06	11.52	0.06	10.89	0.04
D9	14.82	0.07	14.68	0.11	14.82	0.08	14.15	0.06	14.15	0.06	14.43	0.08	14.63	0.07	14.32	0.05
D10	31.91	0.27	33.71	0.46	33.10	0.35	38.73	0.26	30.82	0.26	33.39	0.34	31.75	0.33	36.03	0.20
Q1	6.45	0.05	6.17	0.06	5.90	0.05	5.25	0.03	7.12	0.05	6.55	0.05	6.23	0.05	5.66	0.03
Q2	10.84	0.06	10.47	0.09	10.51	0.07	9.38	0.04	11.57	0.06	10.73	0.07	11.03	0.07	10.05	0.04
Q3	15.00	0.08	14.58	0.12	14.78	0.09	13.30	0.06	15.49	0.07	14.59	0.09	15.22	0.08	14.09	0.05
Q4	20.98	0.10	20.39	0.15	20.89	0.12	19.19	0.08	20.85	0.09	20.31	0.12	21.14	0.11	19.85	0.07
Q5	46.73	0.24	48.39	0.38	47.92	0.29	52.88	0.21	44.97	0.24	47.82	0.30	46.38	0.28	50.35	0.17
Bottom 5%	0.98	0.01	0.94	0.01	0.78	0.01	0.75	0.01	1.11	0.01	1.01	0.01	0.85	0.01	0.80	0.01
Top 5%	21.76	0.27	23.63	0.50	23.04	0.37	28.46	0.29	21.28	0.26	23.07	0.36	21.96	0.35	25.83	0.22
	Value	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**
Mean	5,350	29	10,924	78	23.829	0.140	47.088	0.246	12,165	61	25,211	148	53.617	0.290	106.180	0.441
Median	3,993		7,955		17.509		31.214		9,426		18,409		40.413		74.491	
Poverty line	5,502		8,307		17.900		29.200									
Constant Mean	0.972		1.315		1.329		1.613									
Nominal	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**	**Share**	**St.E.**
D1	2.12	0.02	2.09	0.03	1.91	0.02	1.58	0.01	2.29	0.02	2.23	0.03	2.01	0.02	1.71	0.01
D2	3.42	0.03	3.33	0.03	3.23	0.03	2.63	0.02	3.59	0.03	3.40	0.03	3.40	0.03	2.84	0.01
D3	4.39	0.03	4.21	0.04	4.19	0.03	3.46	0.02	4.54	0.03	4.18	0.03	4.39	0.03	3.70	0.02
D4	5.25	0.03	5.07	0.05	5.16	0.04	4.25	0.02	5.37	0.03	5.03	0.04	5.33	0.03	4.53	0.02
D5	6.19	0.04	5.99	0.05	6.20	0.04	5.14	0.03	6.24	0.04	5.93	0.04	6.37	0.04	5.46	0.02
D6	7.38	0.04	7.03	0.06	7.42	0.05	6.21	0.03	7.29	0.04	6.97	0.05	7.57	0.04	6.57	0.03
D7	8.97	0.05	8.35	0.07	8.99	0.05	7.66	0.04	8.68	0.05	8.27	0.05	9.11	0.05	7.98	0.03
D8	11.02	0.05	10.37	0.09	11.14	0.07	9.88	0.05	10.71	0.06	10.31	0.06	11.24	0.06	10.21	0.04
D9	14.86	0.08	14.17	0.11	14.73	0.08	14.16	0.07	14.73	0.07	14.48	0.09	14.88	0.07	14.59	0.06
D10	36.38	0.28	39.38	0.46	37.04	0.34	45.03	0.27	36.56	0.27	39.19	0.34	35.70	0.31	42.41	0.21
Q1	5.55	0.04	5.42	0.06	5.14	0.04	4.22	0.03	5.88	0.04	5.63	0.05	5.41	0.04	4.55	0.02

Q2	9.65	0.06	9.27	0.08	9.34	0.07	7.71	0.04	9.91	0.06	9.21	0.07	9.72	0.06	8.23	0.04
Q3	13.57	0.08	13.02	0.11	13.62	0.09	11.34	0.06	13.54	0.08	12.90	0.09	13.94	0.08	12.04	0.05
Q4	19.99	0.10	18.72	0.15	20.13	0.12	17.54	0.09	19.38	0.09	18.58	0.11	20.35	0.11	18.18	0.07
Q5	51.24	0.25	53.55	0.37	51.77	0.28	59.19	0.21	51.29	0.24	53.68	0.28	50.58	0.26	57.00	0.17
Bottom 5%	0.85	0.01	0.83	0.01	0.69	0.01	0.61	0.01	0.93	0.01	0.88	0.01	0.75	0.01	0.65	0.01
Top 5%	25.55	0.28	28.88	0.51	26.52	0.37	33.98	0.31	25.69	0.26	28.41	0.35	25.27	0.33	31.09	0.24
	Value	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**	**Value**	**St.E.**
Mean	5,355	36	10,903	104	23.882	0.171	46.618	0.289	12,406	79	25,376	192	53.731	0.338	104.674	0.518
Median	3,594		7,090		16.181		26.267		8,323		16,334		37.078		62.498	

Note: Mean and median in MZM (1996/97 and 2002/03) and MZN (2008/09 and 2014/15). *Real values are obtained normalising nominal consumption to account for variation in prices over the months of the survey and over 13 geographical areas. Deflated values are obtained by dividing the current real consumption by the corresponding poverty line.
Source: Authors' calculations based on IAF/IOF.